



# FLOREY ALUMNI NEWSLETTER

October 2017

Howard Florey Institute  
National Stroke Research Institute  
Brain Research Institute  
Mental Health Research Institute  
Florey Institute of Neuroscience and Mental Health

THE  
FLOREY  
INSTITUTE OF NEUROSCIENCE & MENTAL HEALTH



# WELCOME



A warm welcome from all of us at the Florey. I hope you enjoy reading about our latest research news. I encourage you to stay connected with your fellow Alumni, to celebrate your successes and career developments. With this in mind, I hope to see you at our Alumni November evening drinks (details included on the back page).

A handwritten signature in black ink, appearing to read 'Geoffrey A. Donnan'.

Best wishes  
Geoffrey A Donnan AO  
MBBS MD FRACP FRCP(Edin) FAHMS  
Director

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## LAUNCH OF THE MELBOURNE DEMENTIA RESEARCH CENTRE

Federal Health Minister, the Honourable Greg Hunt, MP launched the Melbourne Dementia Research Centre on 25th September. The Centre is a collaboration between the University of Melbourne and the Florey with the aim of transforming the treatment of dementia by studying the ageing brain. Professor Ashley Bush (MB BS, DPM, FRANZCP, PhD) the Director of the Centre said, “the Centre will focus on integrating basic and translational research into dementia, with a special focus on clinical trials and clinical longitudinal studies. The \$26M joint venture will bring 200 dementia researchers together in a national first for the field”.

The collaboration with the University of Melbourne, will see several commitments, announced by the Dean of the Faculty of Medicine, Dentistry and Health Sciences and Assistant Vice-Chancellor (Health), Professor Shitij Kapur (FRCPC, PhD, FMedSci). These commitments are collaboration in science, translation of research and a commitment to patients and families.

The Melbourne Dementia Research Centre is currently recruiting participants for two studies: the 3D Trial (Delaying Dementia with Deferiprone) and the Healthy Brain Project.



Professor Ashley Bush, Hon Greg Hunt MP,  
Professor Geoffrey Donnan AO and Professor Shitij Kapur

**For more information about these trials or to participate in the 3D study:** [www.florey.edu.au/3Dstudy](http://www.florey.edu.au/3Dstudy) and for **the Healthy Brain Project:** <https://healthybrainproject.org.au/>

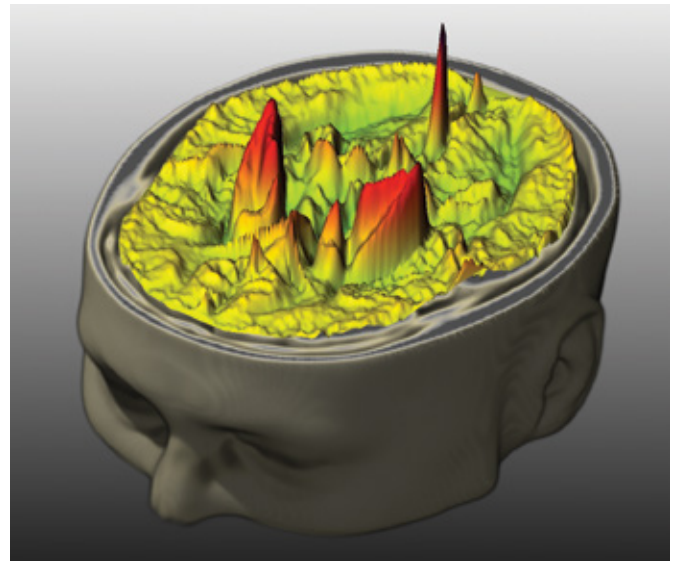
# AUSTRALIA LEADING THE WAY ON ALZHEIMER'S RESEARCH

Professor Ashley Bush and his team are about to start a clinical trial testing the effects of a drug that removes excess iron from the brain, having established that an elevation of iron in the brain seems to contribute to the damage that is occurring in Alzheimer's disease.

"We have found that it is not enough to have amyloid, you also have to have elevated iron. If your iron levels go beyond a certain level, then the brain cannot tolerate the presence of the amyloid. The question then becomes, what would happen if you could lower the iron in the brain with drugs", Ashley says.

The only way to remove iron from the body is by using a drug that removes it. Deferiprone is used for the treatment of iron overload disorders and will be used in this trial to see if it slows the progression of the disease.

Ashley says, "If the 3D trial results prove that low iron slows disease progression, we imagine a future where, if a brain MRI scan shows high brain iron levels, then we would order an amyloid PET scan. Once we had those two measurements, we could predict the likely onset of Alzheimer's and begin therapy to lower the iron, and delay disease onset."



The \$1.855M NHMRC project grant provides the team with the chance to test 171 people in a randomized placebo controlled trial. This type of grant helps to create new knowledge by funding the best investigator-initiated research project plan, for between one and five years, in any area relevant to human health.

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## NEW STROKE TREATMENTS IN THE PIPELINE

Florey researchers have recently published two significant papers, both in preclinical stroke. The first, in Molecular Psychiatry, was by Peng Lei, (PhD, 2012) from the Oxidation Biology Unit who looked at the protective effect of tau, which lowers brain iron levels. After a stroke, tau levels are reduced, and iron levels build up inside neurones, leading to ferroptosis. Anti-ferroptotic drugs as well as iron chelation rescued tissue damage and restored functionality in their stroke model.

The second paper from Associate Professor Clare Parish, (BBiomedSci, PhD, 2002), Head of the Stem Cells and Neural Development Laboratory, was published in Cell Reports. It involved implanting exogenous cortical neurones differentiated from human pluripotent stem cells along with a hydrogel supporting matrix into a stroke animal model. The animals showed amazing functional recovery and cell circuit integration. Brain repair following stroke is a major focus area for Florey researchers.



Associate Professor Clare Parish

# EVENTS WRAP



## Equality for Women in Science

On 20th September, the Florey welcomed Professor Bob Wood from the Centre for Ethical Leadership to present gender equity issues confronting the Institute. Professor Wood is investigating the structural reforms required to overcome the loss of our female mid-career researchers. Australia is ranked number one, in the OECD for female participation in education, but is ranked 34th in the OECD for labour market participation. There is a very real loss of talent occurring as women leave the laboratory.

Unconscious bias, social demands and inequality underpin the gender gap. The Florey's Equality in Science committee is active in boosting the numbers of women in science leadership, driving change within the institute.

To listen to Bob Wood's lecture, visit the Florey's youtube channel at: [www.youtube.com](http://www.youtube.com).

# UPCOMING EVENTS

## Alumni Evening Drinks - Wednesday 15th November 2017

Please join us for an evening of fellowship and a sharing of knowledge at our November Alumni event. Professor Geoffrey Donnan AO will be joined by Professor John Funder AC. (MD PhD FRACP FRCP LLD DMedSc).

Professor John Funder AC is an Alumnus of the Florey and is the past Director of the Baker Heart and Diabetes Institute (1990-2001). He is currently a Senior Fellow of the Hudson Institute. Professor Funder, having published 500 papers, is an internationally acknowledged expert in mineralocorticoid receptors and aldosterone biology.

Drinks and canapes will be served on our 5th floor, overlooking the Parkville Medical Research Precinct. Learn about some of our recent exciting advances in brain research from Professor Donnan and meet fellow colleagues and Alumni.

**Date:** Wednesday 15th November 2017

**Time:** 6pm - 8pm



The Florey, Parkville campus

**Venue:** The Florey Institute of Neuroscience and Mental Health.  
Level 5, Kenneth Myer Building  
30 Royal Parade, Parkville

**RSVP:** to Irene Crebbin by Wednesday 8 November  
Email: [irene.crebbin@florey.edu.au](mailto:irene.crebbin@florey.edu.au)  
Phone: 03 8344 1478

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